WO 2005/032221 PCT/EP2004/052116

12

## **CLAIMS**

- 1. A method for manufacturing a high-frequency assembly, wherein a plurality of components, comprising at least one (12, 30) which is frequency-specific, is placed with respect to each other using an automatic assembly apparatus and is interconnected, characterized in that a frequency-encoding feature (23, 24) is looked for in a specimen of the frequency-specific component (12, 30), and that the specimen is built in if the feature (23, 24; 26) is found in the specimen and is judged to be correct, and that otherwise the specimen is rejected.
- 2. The method of claim 1, characterized in that the specimens to be placed are taken from a stock (25), and that the stock (25) is rejected in its entirety if several specimens of the frequency-specific component (12, 30) successively taken from the stock (25) have been rejected.
- 3. The method of one of the preceding claims, characterized in that the frequency-encoding feature (23, 24; 26) is looked for at a plurality of locations (22, 29) of each specimen of the frequency-specific component (12, 30), and that an orientation of the specimen is judged based on the location (22, 283) at which the feature (23, 24; 26) is found.
- 4. The method of claim 3, characterized in that a reference point and a reference direction are found at the component, a number of vectors of a same length starting from the reference point under predefined angles with respect to the reference direction

WO 2005/032221 PCT/EP2004/052116

13

are formed, and the locations (22) where the feature (23, 24) is looked for are defined at the ends of the vectors.

- 5. The method of claim 4, characterized in that the ends of the vectors form a square.
- 6. The method of one of claims 3 to 5, characterized in that various embodiments of the frequency-specific feature (23, 24) are adapted to be transformed into one another by rotation, and that for distinguishing between the embodiments, the orientation of the component (12) is taken into account.
- 7. The method of claim 1 or 2, characterized in that an outline of the component (30) is detected, that the frequency-specific feature (26) is looked for at the component, and that from the location (283) where the feature (26) is found with respect to the outline, the orientation of the component (30) is concluded.
- 8. The method according to one of the preceding claims, characterized in that the frequency-specific component (12) is a circuit board.
- 9. The method of claim 8, characterized in that the feature is formed of conductor material.

WO 2005/032221 PCT/EP2004/052116

14

- 10. The method according to claims 1 to 7, characterized in that the frequency-specific component is a mechanical component, in particular a cover (30) for a component mounted underneath.
- 11. The method according to one of claims 1 to 8 or 10, characterized in that the frequency-specific component is a bore (26).
- 12. The method according to one of claims 1 to 8 or 10, characterized in that the frequency-specific feature (23, 24) is printed.
- 13. A component (12, 30) for a high-frequency assembly having a specific working frequency, characterized in that it is provided with a machine-detectable feature (23, 24; 26) representative of the specific working frequency.
- 14. A manufacturing apparatus for the automatic manufacture of a high-frequency assembly, comprising at least a placing apparatus for placing a plurality of components of the high-frequency assembly, at least one (12, 30) of which is frequency specific, with respect to each other, characterized in that the manufacturing apparatus comprises means (18, 19, 20) for detecting a feature (23, 24; 26) representative of the specific working frequency of said component (12, 30) and for deciding, based on the detected working frequency, whether the component (12, 30) is built in or is rejected.